UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA

DATAMIZE, L.L.C.,	)	
a Wyoming limited liability corporation	)	
	)	CASE NO. C 02-05693 VRW
Plaintiff,	)	
Counter-Defendant,	)	
v.	)	
	)	
PLUMTREE SOFTWARE, INC.	)	
a Delaware corporation,	)	
	)	DEMAND FOR JURY TRIAL
Defendant,	)	
Counter-Claimant.	)	
	)	

DECLARATION OF JEREMY ROSENBLATT

1.   My name is Jeremy Rosenblatt. My curriculum vitae is attached to this Declaration as Exhibit "1." I am over the age of 18 years and am competent and qualified to make this declaration. Each of the matters contained in this Declaration are within my personal knowledge and are true and correct.

2.   In my opinion, the claims of U.S. Patent 6,014,137 are neither indefinite nor ambiguous. One of ordinary skill in the art, after reading the claims and specification of the patent, would understand what does and does not infringe the patent. This opinion is based my reading of the patent and its prosecution history.

3.   My professional background is as a hardware/software/systems technologist with 20 years experience leading high technology organizations. I currently specialize in assisting growth companies in the Internet and Enterprise software spaces. My background includes a blend of IT, Product Development and Professional services. I recently served as Chief Technology Officer of Ask Jeeves, the Internet natural language search engine company. Prior to Jeeves, I held CTO, VP of Engineering, VP of Product Development, and Professional Services positions at RootsWeb (now MyFamily, Inc), ViewStar (acquired by Lucent), SkyDesk, Integrated Automation (acquired by Litton Industries) and ePhones. I currently serve on the advisory board of Netli, an Application Delivery Network provider of global sub-second response times for Web applications. My academic background includes an BSEE degree from UCB in a joint Electrical Engineering and Computer Sciences program.

4.   I began work in this case by reading the patent and its prosecution history, and then reviewed cited prior art and publications. While reading, I endeavored to use a mindset of one of ordinary skill in the art of software system development involving user

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interfaces circa 1997. As such, a developer would be familiar with the design of graphical user interfaces, both single and multi-screen. They would be aware of the benefits of clear meaning, easy to use screens, and would have strived for a mixture of ease of use and aesthetically pleasing presentation. As part of designing such screens they would know about avoiding extraneous distracting detail, the importance of font size, spacing, balance, and color compatibility.[1]

5.   The specifications section of '137 clearly describes the benefits of allowing a creator of a system to impose limits on the choices available to a system author (the person who uses the authoring package to create user interfaces) so that the creator could impose his or her views of an aesthetically pleasing display, whatever that may be, on the system author and ultimately the end-user.[2]

6.   In reading the '137 patent, it is clear from the context that the term "aesthetically pleasing" is from the point of view of the person setting the limits. For example, the patent does not require that anyone else agree with the aesthetic views of the person setting the limits, only that the invention provide a means for the creator to set limits and to have them enforced on the author/user. Both the specification and Claim One clearly convey that the invention provides a means for the creator to enforce his or her aesthetic will by limiting the choices made available to the system author. My understanding of the claim is guided by the following appearances of the term "aesthetic" and "aesthetically pleasing"….

The term first appears in the abstract and the Specification Summary, which reads,

> The authoring system enables the user interface for each individual
> kiosk to be customized quickly and easily within wide limits of
> variation, yet subject to constraints adhering the res[ul]ting[3]
> interface to good standards of aesthetics and user friendliness.

The specification continues with,

> It is a further advantage of the present authoring system that an
> individual using the authoring software to devise a kiosk interface

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[1] They would not yet, though, have the benefit of the teachings of the subject patent, more specifically the benefits of providing limited choice for the purposes of uniformity and imposition of a system creator's aesthetic decisions on subsequent users. Typical authoring packages of the day would have attempted to provide the ability for interface authors to specify any screen elements they wished and usually emphasized their expanding range of choices rather than intentional limitations.

[2] Note that the invention involves multiple roles. The person building the authoring system is referred to herein as the "system creator." The person using the intentionally limited set of elements provided by the invention to build kiosk screens is referred to in the patent and here as the "system author." The person using the kiosk and its screens is referred to as the "kiosk user" or the "end-user."

[3]   The word "resulting" is correctly spelled in the abstract in a sentence that is otherwise identical to the one in the Specification Summary, thus it is clear that the intended word is "resulting", not "resting"

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screen (that individual is referred to herein as a "system author") is only given a limited range of choices for stylistic and functional elements appearing in the screen displays. In this way major aesthetic or functional design choices such as button s[t]yles and sizes, window borders, color combinations, and type fonts as well as hierarchical methods of retrieving information may be built into the system taking into account the considered opinions of aesthetic design specialists, database specialists, and academic studies on public access kiosk systems and user preferences and problems. Only a limited range of pre-defined design choices is then made available to a system author. Nevertheless, the authoring software is structured to make it amenable to change for example to permit new elements to be added to the system or to take into account the results of new studies on user interactions with computer kiosks.

7.   From the above it is clear that the intent of the invention is to provide a means for aesthetic decisions to be made initially and "…be built into the system taking into account the considered opinions of aesthetic design specialists, and academic studies…" and then present, "[o]nly a limited range of pre-defined design choices... to the system author."   The fact that the specification discusses taking into account expert opinions and then providing only a limited range of pre-defined design choices further supports the position that what matters is the ability for the person building the authoring system (i.e., the system creator) to impose some sort of design aesthetic rather than implying that the result is necessarily aesthetically pleasing to any particular user or system author.

This understanding is further supported by the paragraph below (emphasis mine):

A closer look at the structure of the screen layout of FIG. 2A is in order. The buttons 21 have a fixed predefined size, which is chosen not only to make them aesthetically pleasing in appearance, but also easy to use on a touch screen by persons generally unpracticed with touch screen operation. The button placement in FIG. 2A is generally fixed along two adjacent edges. *This is an aesthetic choice, but it is a choice that is forced by the authoring software to assure that once an aesthetically and functionally acceptable button size and layout has been chosen, it will be maintained throughout all further screen layouts for all kiosks* without having to expend time and effort re-creating an acceptable button layout anew for each kiosk. *Other aesthetic button layouts may also be used, but once a general button layout is devised, the software makes it available for use in all kiosk interface screens. Considering that many many screen layouts will generally have to be set up and then regularly revised, limiting the system author's freedom to devise new button patterns and button styles greatly enhances the ease with which new kiosks may be brought*

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in operation and ensures that the button pattern will be
aesthetically and operationally acceptable.

8.   In the first bolded section above, the specification makes it clear that the issue is one of controlling who makes the aesthetic decisions. In this invention the decision is made by the system creator when they build the authoring system rather then leaving it up to the system author using the system. The decision, once made by the system creator, is then forced on the system author by the software.

9.   In the second bolded section, the specification goes on to explain that this approach of placing the decision of aesthetic button layouts into the hands of the system creator and then "limiting the system author's freedom" provides the benefits of allowing the system author to set up and revise many screen layouts with less fear that he or she will inadvertently compromise the aesthetics or operation as conceived by the system creator.

10.   The terms "aesthetic" and "aesthetically pleasing" in the patent serve to make it clear that the motivation of limiting selection is to allow the system creator to enforce his/her will regarding the "look and feel" and aesthetic aspects rather than solely functionality. Thus '137 provides for the system creator to specify elements such as a button pair in the Screen Layout table with the layout relationship predetermined by the system creator rather than simply leaving it to the system author to lay out each button individually. The specification (col 12: line 66 thru col 13:line 6) reads:

> The Screen Layout table defines the different appearances
> available for a screen. The Screen Type Lower Button has a layout
> that contains the layout for one Button Object, two Buttons
> Objects, etc. The system author can then determine how many
> object are to be placed on a screen and what the screen type is and
> pick the appropriate coordinates and place the objects on the screen
> in a predetermined functional and aesthetic format.

11.   Note that, by providing predefined layouts (decided upon by the system creator) that include multiple buttons with a predetermined spatial relationship, the system enforces a particular aesthetic regarding those buttons. The functionality would be the same if it was simply left to the system author to pick individual buttons separately, but the aesthetics would not. Again, it does not matter if everyone agrees on which layouts are most aesthetically pleasing, only that the invention provides for such decisions to be made in advance by the system creator and imposed on the later users (such as the system author).

12.   After studying the specification section I reviewed the claims. The context provided by the specification makes it clear that the "desired uniform and aesthetically pleasing look and feel" is the one that is aesthetically pleasing to (i.e. desired by) the system creator and that the subject of the claim is the ability to have pre-defined element types that permit limited variation. In other words, the inclusion of the term "aesthetically pleasing" in the phrase "in conformity with a desired uniform and

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aesthetically pleasing look and feel" serves to explain that the system creator may use the layout limiting capabilities of the invention as a way to enforce his or her will in the domain of aesthetics rather than just functionality.

Claim 1 excerpts (emphasis mine):

…providing a plurality of pre-defined interface screen element types, each element type defining a form of element available for presentation on said custom interface screens, ***wherein each said element type permits limited variation in its on-screen characteristics in <u>conformity with a desired uniform and aesthetically pleasing</u> look and feel for said interface screens on all kiosks of said kiosk system***

…each element type having a plurality of attributes associated therewith, ***wherein each said element type and its associated attributes are subject to pre-defined constraints providing element characteristics in conformance with said uniform and aesthetically pleasing look and feel for said interface screens***, and

…assigning values to the attributes associated with each of said selected elements consistent with said pre-defined constraints, whereby the aggregate layout of said plurality of selected elements on said interface screen under construction will be aesthetically pleasing and functionally operable for effective delivery of information to a kiosk user;

13.   That reading applies to all three appearances of the term "aesthetically pleasing," including in the third instance (col 21, line10), where it appears in the whereby clause indicating that the resultant aggregate layout will also be aesthetically pleasing. Again, it is not necessary for everyone to agree that a particular result is equally aesthetically pleasing to everyone, only that the invention provided for the imposition of the will of the system creator by virtue of providing pre-defined elements that supported limited variation.

14.   Consider the illustrative analogy of the common use of airline flight attendant uniforms to provide a limited palette for dress. Within a defined uniform, the wearer usually can choose from limited selection of top wear (short-sleeved versus long-sleeved), bottoms (skirt, pants, etc) and often two coordinated colors. Clearly one of the key purposes of the uniforms is to convey a consistent and aesthetically pleasing appearance, where the determination of what is aesthetically pleasing is made by the person who selects the uniform design. Independent of the selector's success (or lack thereof) in picking the best possible design, the approach still succeeds in imposing the selector's aesthetic will on the wearers.

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15.   In addition to that fact that agreement by all on the aesthetic result is not necessary, it would be a mistake to assume that, in the domain of user interface display designers, the term "aesthetically pleasing" is subjective, indefinite, or without objective meaning. In user displays there are parameters of design that contribute to a display getting high marks from users for being "aesthetically pleasing." This fact has been well understood for many years by those experienced in interface design. While universal agreement on all the subtleties may not exist, it is not necessary in order to produce designs that are generally accepted as being aesthetically pleasing. These characteristics are generally accepted to include:

- Symmetry – visual balance produced by even spacing and layout
- Consistency – similar look across objects in a screen and/or across all screens
- Predictability - use of similar objects for similar functions
- Simplicity – avoidance of unnecessary variations of object parameters (number of fonts, sizes, etc)
- Cleanliness - avoidance of unnecessary clutter
- "Non-crowdedness" - spacing that is appropriate for the number of elements (e.g. buttons) on a screen and the use of more than one screen where necessary rather than squeezing too many objects (e.g. buttons) on one screen

16.   It is worthwhile noting that, although '137 makes a reference to a lack of consensus regarding the best "organization of data for kiosk systems and the form of the user interface" (column 2, lines 54-56), a review of the papers cited in that paragraph makes it clear that the reference is to the organization of content linkages and the high-level decisions about how to best present the data rather than to the details of screen elements, layouts, and aesthetics. The cited papers address such issues as whether a city guide should cater to individuals who already know where they want to go versus catering to someone wishing to browse through the contents of the database.

17.   The statement in lines 54-56 in no way means there is not substantial consensus that there are techniques of screen design that consistently improve their aesthetic quality, nor does it mean that there are not designs that would be accepted by a consensus of professionals (of ordinary skill in the art) as being aesthetically pleasing. In fact such techniques and designs do exist and are discussed in publications.

18.   Following reading the patent, I consulted other works consisting of scientific papers, articles, and textbooks on interface design. Although some of work is recent, both the scientific and software development communities understood in 1997 and earlier that objective aspects of interface design could be predictably used to produce more aesthetically pleasing computer display screens that would be agreed to be aesthetically pleasing by most. Experts in the field of interface design have not only demonstrated that the characteristics above relate directly to aesthetically pleasing displays, but that the relationship can be objectively measured and, in some cases, mathematically described.

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19.   To quote from a scientific paper titled, "A Mathematical Theory of Interface Aesthetics", by David Chek,[4]

"We have demonstrated that aesthetics can be measured objectively for multi-screen interfaces."

The authors continue with a description of various objective measures of screen display aesthetics. Of particular note are:

2.10. Measure of Regularity - Regularity is a uniformity of elements based on some principle or plan. Regularity in screen design is achieved by establishing standard and consistently spaced horizontal and vertical alignment points for screen elements, and minimising the alignment points.

2.11. Measure of Economy - Economy, illustrated in Figure 3, is the careful and discreet use of display elements to get the message across as simple as possible. Economy is achieved by using as few styles, displays techniques, and colours as possible.

2.12. Measure of Homogeneity - Entropy was developed in physics in the 19th century and was applied later in astronomy, chemistry and biology. Entropy influenced almost every science. We interpret the statistical entropy concept for screen design. The entropy equation is given by the following…[mathematical formula]

Note that limiting the range of choices as taught by '137 directly improves both Economy and Homogeneity/Entropy, thus improving, in a measurable fashion, the aesthetics of the resultant display as discussed by Chek.

20.   In reviewing other issued U.S. patents I performed a search of the www.uspto.gov website database. One of the searches yielded interesting results regarding use of the term "aesthetically pleasing" in existing issued patents. Using the search feature on page, http://patft.uspto.gov/netahtml/search-bool.html, I entered *"aesthetically pleasing"* as a search term. The search results indicated that there are over 13,400 patents issued since 1976 containing the phrase "aesthetically pleasing." Limiting the search to those patents with the term *"aesthetically pleasing"* in their actual claims[5] still results in over 170 patents, many of them very recent, with one having been issued as recently as March of 2004. Some of patents using the term "aesthetically pleasing" have been issued for display related inventions.

4,959,801 (9/25/1990) Apley, et al. – "Outline-to-bitmap character generator"

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[4]   Chek Ling Ngo D., Seng Ten L. Byrne J.G. A Mathematical Theory of Interface Aesthetics Visual Mathematics N 1, 2001

[5]   A search definition of: ACLM/"aesthetically pleasing"

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Independent claim #6 says in part, "…to provide a low-resolution bit map character representation of consistent and aesthetically pleasing appearance."

4,237,482 (12/2/1980) Brentlinger – "Display system for achieving aesthetically pleasing lissajous patterns from a single source of signals"
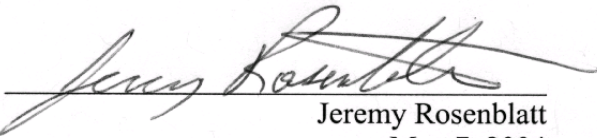
Independent claim #1 says in part, "A display system using a single source of signals to achieve aesthetically pleasing Lissajous patterns on a multi-color phosphor screen..."

21.   My reading of the patent leads me to the conclusion that the claim language is definite and unambiguous in its statement of what is claimed and that a person of ordinary skill in the art would be able to understand the claim and determine whether or not a given piece of work was covered by the claim. The specification section of the patent provides sufficient context to make it clear that the term "aesthetically pleasing" is from the perspective of the system creator and is not, therefore, subject to an indefiniteness claim based on some false assumption that the displays would need to be "aesthetically pleasing" to all possible end-users or system authors.

22.   Furthermore, I concluded that even if one was to use the term in a manner that depended on the perspective of the system authors or end-users, the term has sufficiently clear meaning to one of ordinary skill in the art so as to not be indefinite.

23.   This conclusion is further supported by the use of the term aesthetic or "aesthetically pleasing" in scientific papers, texts, and other patents, in which it is clear that the term has defined meaning in the context of computer displays sufficient for a designer to take advantage of to produce displays that would be deemed "aesthetically pleasing" by others with ordinary skill in the art.

24.   In conclusion, it is clear to me that one of ordinary skill in the art of software development of kiosks and computer user interfaces would understand the claims and be able to determine whether their own work was or was not covered by the claims in question.

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Jeremy Rosenblatt
May 7, 2004

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Jeremy Rosenblatt Professional Background

Summary

Senior technologist combining technical leadership with executive-level business experience and expertise in Product Development, Product Management, Systems Integration, Operations, and Professional Services.

- 15+ years experience as CTO, VP of Engineering, Division Manager, and Director of Professional Services in environments from startups to established public companies.
- Experience managing all phases of product life-cycle, from market requirements through end-of-life, with emphasis on enterprise and large online environments.
- Background in delivering hardware and software, complex systems, and large projects in roles from direct contributor to executive management.

Experience

Ask Jeeves, Emeryville, CA   **2001 – 2003**
Chief Technology Officer
Responsible for technology strategy and all intellectual property across both the Web Properties and Enterprise Solutions business units of this leading natural language search company during its challenging transition to profitability. Ask.com is a top search site and is ranked in the nation's 20 most popular web destinations. The Enterprise Solutions division (since acquired by Kanisa) was a premier provider of natural language enterprise search and web self-help products used by such industry leaders as HP/Compaq Computer, Ford Motors, Verizon Wireless, Nike, and Nestle.

- Led initiatives for product roadmap redefinition and technology synergy across business units.
- Led technology due-diligence for multiple acquisitions.
- Restructured and managed IP portfolio, including competitive analysis.
- Advised on multiple downsizings in successful drive to profitability.
- Advised on divestiture of Enterprise Solutions division and assisted in transition planning.
- Directed outside technology activities including Scientific Board and speaking engagements.

ePhones, Fremont, CA   **1999 – 2001**
CTO (on consulting basis)
Led company-wide technology programs for conversion of wireless retailer from "brick-and-mortar" to multi-faceted e-commerce provider. Responsibilities included recruiting, management, and professional growth of IT team as well as architectural leadership. Projects included high-availability web/e-commerce system, back-end fulfillment, and call center. Left when ePhones closed its doors.

- Transitioned company from dependence on outsourced development/hosting to in-house team, resulting in savings of $1M /yr and improved product quality.
- Built / operated world-class e-commerce systems for premier partners such as Charles Schwab, Costco, NextCard, and Insight, as well as hundreds of private-label sites for smaller affiliates.

RootsWeb (now My Family, Inc., Utah)   **2000 – 2000**
V.P. Engineering / Operations and CIO
Joined the executive team of RootsWeb (largest free genealogy web site in the world) as part of M&A strategy to enhance RootsWeb's acquisition price by upgrading their home-grown operations into a professional organization. Responsible for all technical operations, including 24x7 production data center hosting several million web pages, with over 100 million page views per month and 160 million subscriber emails per month. Note - overlapped with ePhones engagement (above) by agreement with management and interlocking investors. Opted not to relocate to Utah with purchase.

- Led key operations upgrade and hosting move for entire 24x7 data center.
- Played senior technical role in successful negotiations for its purchase by My Family, Inc. with a 2x price premium over offer prior to operations revamp.

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@Backup, Berkeley, CA (now SwapDrive/SkyDesk, Wash, DC) 1998 – 1999
Vice President – New Products / Engineering
Established, staffed, and ran Bay Area new products center for this San Diego-based Internet startup. Responsible for strategy, management, and marketing, as well as hands-on development, of new products. Company was subsequently acquired by SwapDrive of Washington, D.C.
- Conceived, produced, and patented SkyDesk, the first product to give users access to a fully functional replica of their desktop computer from anywhere, over the Internet.
- Successfully featured SkyDesk at DEMO99, the prestigious forum for the 60 hottest new products of the year.

Mosaix /ViewStar (Since acquired by Lucent), Alameda, CA 1990 – 1998
Director, Enterprise Systems Group
Formed and led organization building enterprise-scale implementations of ViewStar's CRM and workflow solutions. Responsible for professional growth and mentoring of development and implementation teams. Frequent speaker at conferences. Left to join @Backup.
- Transformed non-revenue cost center into profitable professional services organization.
- Instituted formal, published implementation methodology that shortened delivery cycles, increased project success rates, and provided competitive edge in high-dollar selling situations.
- Created "center of excellence" for enterprise implementations of three-tier production systems for call centers, CRM, and large workflow applications.
- Acted as key liaison with marketing to define next-generation product.

Director, Engineering
Led core engineering group responsible for all device development plus specialty product development group with intimate product management involvement. Product extensions became the leading edge of the next generation product while providing new revenue stream.

Director, Product Support
Managed all of Product/Technical support through key transition from fledgling operation to established, trained department with CRM support, multi-tier escalation, and 24x7 staffing.

Integrated Automation, Emeryville, CA 1980 – 1990
Division Manager
General manager of division producing image-based document management systems. Full P/L responsibility, including sales exceeding $10M and technical leadership.

Director, Technical Operations
Managed technical operations for division with revenues of $10M+. Responsible for delivery of all projects including schedule, staffing, profitability, and technical content.

Program troubleshooter
Reporting to the C.E.O. - responsible for recovering programs in trouble. Created elite SWAT team for crisis intervention and successfully turned around several "failed" large projects from other divisions into multi-million dollar expansion reference sites.

Education
University of California at Berkeley **Berkeley, CA**
BS – Electrical Engineering and Computer Science

Patents
US Patent 6,263,363 Issued 2001 – "System and method for creating an internet-accessible working replica of a home computer on a host server controllable by a user operating a remote access client computer."

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References (in addition to the ones listed in '137)

A Mathematical Theory of Interface Aesthetics David Chek Ling Ngo and Lian Seng Teo
http://www.mi.sanu.ac.yu/vismath/ngo/

Colour Group Selection for Computer Interfaces
colourharmony.massey.ac.nz/ publications/Color-Group-Selection-for-Computer-Interfaces-OnlineVersion.pdf

Tractinsky N., Aesthetics and Apparent Usability: Empirically Assessing Cultural and Methodological Issues, in: CHI '97 Conference Proceedings, Association for Computing Machinery, New York, 1997.

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